

R E M A R K S

This is in response to the Office Action that was mailed on December 28, 2004. Claim 5-9 are cancelled, without prejudice to their subject matter or to their reassertion in this or a continuing application. Claims 1, 10, and 11 are amended to specify that polyamide elastomer component (B) is a polyether ester amide, based upon such disclosure herein as that in lines 23 to 27 on page 14 of the specification. Claim 1 is also amended to specify that components (C) and (B) are dispersed in component (A), as disclosed e.g. in lines 8-20 on page 15 of the specification; see also original claim 2. No new matter is introduced by this Amendment. Entry of this Amendment - in order to place the application into condition for allowance or **into better condition for appeal** - is respectfully solicited. Claims 1-4, 10, and 11 are pending in the application.

Claims 1-4, 10, and 11 were rejected under the first paragraph of 35 U.S.C. §112 as exceeding the scope of the enablement. It is respectfully submitted that this ground of rejection is obviated by the present amendment of claim 1.

Claims 1 and 2 stand rejected under 35 U.S.C. §103(a) as being unpatentable over US 5,652,326 (Ueda). The rejection is respectfully traversed.

Ueda is silent about two features recited in claim 1 - the dispersion characteristics of components (B) and (C) and the specific range of proportion of acid group in component (C) to amide group in component (B). The Examiner acknowledges that Ueda fails to teach quantitative features of the present invention, but argues that "it is well within the purview of the proportion ranges of the polyesteresteramide and acid-grafted olefinic polymer of Ueda et al. to employ them with the claimed concentrations relative to the polyacetal and relative to each other". Office Action of 08/25/2004, page 3, middle. The Examiner also acknowledges the continuous phase/discontinuous phase feature of the present invention, but argues that it "is inherent in the prior art blend". Office Action of 08/25/2004, page 3, bottom.

In a recent opinion¹, the Court of Appeals for the Federal Circuit held that information alleged by the Examiner to be "well known" in the industry but which was not supported in the record was an improper basis for finding motivation in the

prior art to support a ruling of obviousness. The patent application was directed to a patent on generating images on a video display screen using a light pen. It included a means claim for storing the display screen in bit map memory. According to both the Examiner and the Board, the claimed invention substituted a bit map memory for the conventional memory used in prior art patents, which was a substitution they claimed was "well known in [the] computer display art." The Federal Circuit held that such generalized claims of what the secondary references teach and of what the skilled artisan would have been "well aware" do not satisfy the level of specificity required by the MPEP. The court noted that the statements of the Examiner, relied upon by the Board, amount to no more than conclusory statements of generalized advantages and convenient assumptions about skilled artisans. With respect to core factual findings, the Patent Office must point to some concrete evidence in the record, rather than relying on its assessment of what is "well recognized" or of what a skilled artisan would be "well aware."

Manifestly, in the present situation the Examiner has failed to state a sustainable *prima facie* case of obviousness.

¹ *In re Beasley*, www.fedcir.gov/opinions/04-1225.pdf.

Even if the Examiner were to find ancillary prior art making up the two major discrepancies in the rejection over the Ueda reference noted above, in the present invention, the proportion of acid groups in component (C) to amide groups in component (B) is significant, and has a profound influence on the properties of the compositions in question. Nothing in the Ueda reference suggests that such is the case, much less teaches the range for such proportion recited in the present claims.

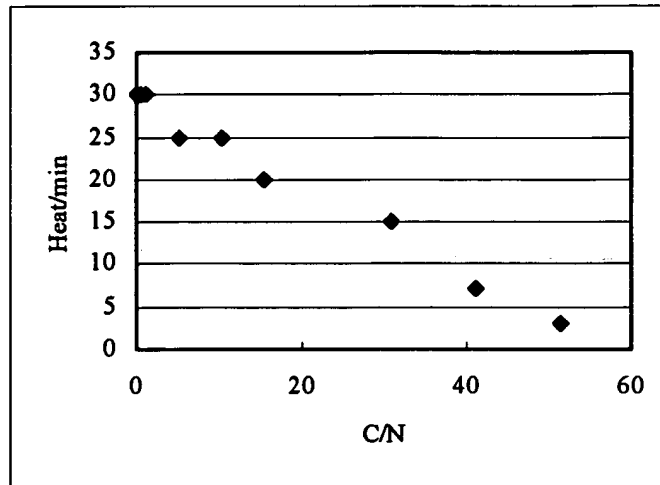
More specifically, the specific range of the proportion of acid group in component (C) to amide group in component (B) recited in claim 1 ("a range of 0.1 - 50 moles of the acid groups to 100 moles of the amide groups") is determined in view of the best balance of various physical properties of the resin composition - that is, heat stability, Izod impact strength, dispersed particle size, volume resistivity, and tensile elongation.

Referring to the present specification, the results of Examples 17 and 19-25 and Comparative Example 17 clearly establish the fact that the proportion of acid group in component (C) to amide group in component (B) in the presently claimed compositions is not inherent in Ueda. The values of the proportion of acid group in component (C) to amide group in

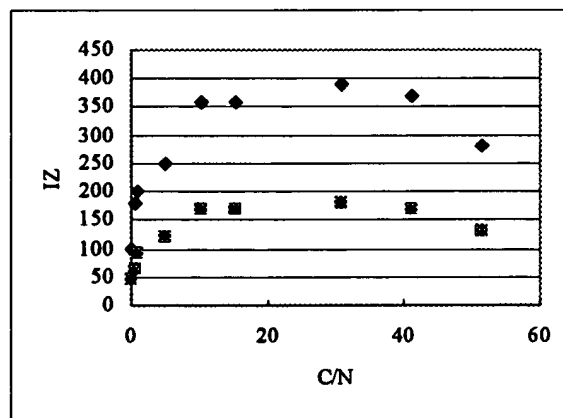
component (B) of Examples 17, 19-25, and Comparative Example 17 are 15.4, 0.5, 1.0, 5.1, 10.3, 30.9, 41.2, 51.5, and 0.0, respectively. The results reported in these Examples show that the physical properties of the compositions have distinct correlations with the proportions thereof.

Thus, in a first correlation, the greater the proportion of acid group in component (C) to amide group in component (B), the smaller the heat stability and the volume of resistivity. In a second correlation, the smaller the proportion of acid groups in component (C) to amide groups in component (B), the greater the dispersed particle size. In a third correlation, the values of the Izod impact strength and the tensile elongation respectively rise and fall at a peak of 30 of the proportion. Five graphs representing the above first to third correlations follow:

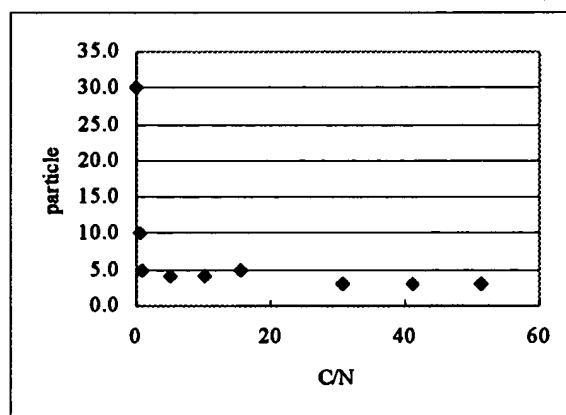
Graph 1



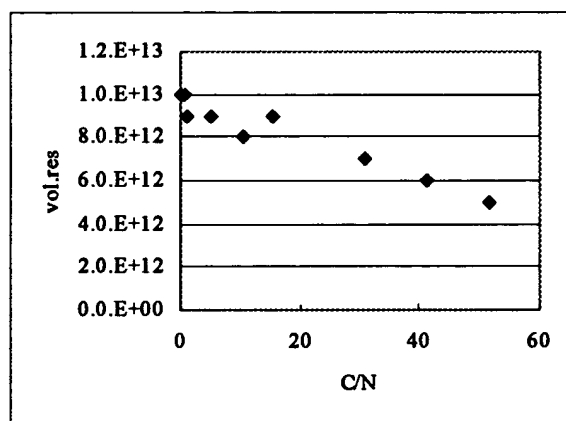
Graph 2



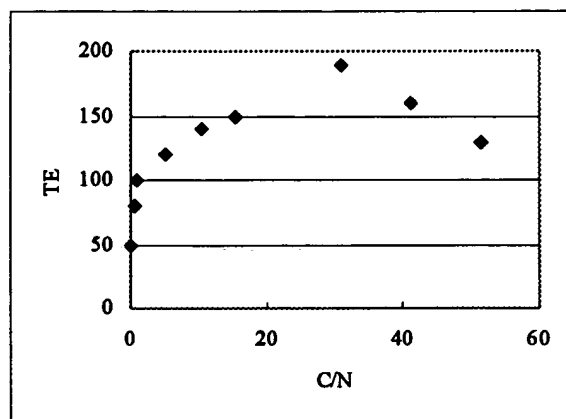
Graph 3



Graph 4



Graph 5



In Graph 1, the longitudinal axis represents heat stability (min) and the horizontal axis represents acid group-amide group proportion in connection with Examples 17 and 19-25 and Comparative Example 17. In Graph 2, the longitudinal axis represents Izod impact strength (J/m) and 23°C (upper points) and at -50°C (lower points), while the horizontal axis represents acid group-amide group proportion in Examples 17, 19-25, and Comparative Example 17. Graph 3 is one in which the longitudinal axis represents dispersed particle size (μm ; maximum) and the horizontal axis represents acid group-amide group proportion, again with reference to Examples 17 and 19-25 and Comparative Example 17. In Graph 4, the longitudinal axis represents volume resistivity ($\Omega\cdot\text{cm}$) and the horizontal

axis represents acid group-amide group proportion in Examples 17, 19-25, and Comparative Example 17. Finally, Graph 5 is one in which the longitudinal axis represents tensile elongation (%) and the horizontal axis represents acid group-amide group proportion in connection with Examples 17 and 19-25 and Comparative Example 17. These graphs vividly show the above-mentioned remarkable profiles.

Although Ueda discloses data that can be used to calculate the amount of amide groups in the polyamide elastomer, Ueda fails to disclose data that can be used to calculate the amount of acid groups in the acid-modified polyolefin. Hence, the proportion of acid groups to amide groups cannot be determined based upon the disclosure of Ueda. Ueda of course neither discloses nor suggests that the physical properties of the compositions have correlations with the amide group/acid group proportions.

Based upon all of the above considerations, it would be unobvious for a person of ordinary skill in the art to arrive at the inventions of claims 1 and 2 from the teachings of Ueda.

Claims 3, 4, 10, and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ueda in view of US 5,854,324 (Tajima). The rejection is respectfully traversed.

All of the points made above with respect to claims 1 and 2 apply to this ground of rejection. The Tajima reference fails to remedy any of the deficiencies of the Ueda reference. Moreover, the Examiner has not explained how the Tajima reference (and/or the Ueda reference) suggests a composition "consisting essentially of polyoxymethylene resin (A), polyamide elastomer (B), acid-modified olefinic resin (C), and polydimethylsiloxane lubricant (D)", as required by claims 10 and 11.

SUMMARY. Applicants have thus demonstrated that the presently claimed compositions are significantly improved in various ways as compared to conventional compositions. In any case, however, regardless of the precise scale of improvement provided by the presently claimed compositions, a fundamental consideration with respect to the obviousness rejections of record is that neither Ueda nor Tajima teaches or suggests that the physical properties of the compositions in question are affected by, and can be managed by adjusting, the acid:amide ratio that characterizes the present invention.

The Examiner is respectfully reminded in this connection that the discovery of a problem itself (in the present case, how to manage physical properties of the compositions) can mean that an invention is not obvious even where the solution might be obvious once the problem is recognized. As the CCPA stated in *In re Shaffer*, 108 USPQ 326,

... a person having the references before him who was not cognizant of appellant's disclosure would not be informed that the problems solved by appellant ever existed. Therefore, can it be said that these references which never recognized appellant's problem would have suggested its solution? We think not

108 USPQ at 329.


Withdrawal of the rejections of record is respectfully solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Richard Gallagher (Reg. No. 28,781) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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